

Listing of the Claims:

1. (Currently amended) A control method for an electric power converter that comprises first and second DC power sources, wherein a pole is formed by connecting a positive pole of the first DC power source with a negative pole of the second DC power source, and voltage is applied to a load by ~~switching~~ operating switches between ~~the~~ a negative pole of the first DC power source and ~~the~~ a positive pole of the second DC power source[;], the method comprising:

generating a voltage command indicative of a voltage to be applied to the load;

and

switching a pole to be connected to the load by:

~~determining conductivity of~~ operating a switch between the positive and the negative poles of the first DC power source when the voltage command is lower than ~~the~~ an electric potential ~~output by of the negative pole of~~ the second DC power source; and

~~determining conductivity of~~ operating a switch between the positive and the negative poles of the second DC power source when the ~~aforementioned~~ voltage command is higher than the electric potential ~~output by of the negative pole of~~ the second DC power source; and switching the pole to be connected to the load in accordance with the aforementioned determining.

2. (Currently amended) A control method for an electric power converter described in claim 1, ~~wherein the control method uses two carriers, a first lower carrier and a second upper carrier,~~ further comprising:

setting a lower limit of ~~the~~ a lower carrier to ~~the~~ an electric potential of the negative pole of the first DC power source's ~~negative pole~~ source;

setting an upper limit of the lower carrier and a lower limit of ~~the~~ an upper carrier to ~~the~~ an electric potential of a pole formed by connecting the positive pole of the first DC power source with the negative pole of the second DC power source; and

setting ~~the~~ an upper limit of the upper carrier to the an electric potential of the

positive pole of the second DC power source's positive pole source.

3. (Currently amended) A control method for an electric power converter described in claim [[1]] 2 wherein the lower carrier and the upper carrier are triangular waves.

4. (Currently amended) A control method for an electric power converter described in claim 1, further comprising:

generating a power distribution command based on a desired power distribution ~~commands~~ for at least ~~said~~ the first and the second DC power sources; and

generating [[a]] an AC voltage command ~~for said power converter based on the~~ load; and wherein generating a the voltage command ~~by~~ includes adding ~~said the AC~~ voltage command to ~~said the~~ power distribution command.

5. (Currently amended) A control method for an electric power converter that comprises first and second DC power sources, wherein a pole is formed by connecting a positive pole of the first DC power source with a negative pole of the second DC power source, and voltage is applied to a load by switching operating switches between ~~the~~ a negative pole of the first DC power source and ~~the~~ a positive pole of the second DC power source, ~~using two carriers consisting of a lower carrier and a higher carrier~~; the method comprising:

generating a voltage command indicative of a voltage to be applied to the load;  
and

switching a pole to be connected to the load by:

~~determining conductivity of~~ operating a switch between the positive and the negative poles of the first DC power source by comparing the voltage command with ~~the~~ a lower carrier; and

~~determining conductivity of~~ operating a switch between the positive and the negative poles of the second DC power source by comparing the voltage command with ~~the~~ an upper carrier; and

~~switching the pole to be connected to the load in accordance with the~~  
~~determining.~~

6. (Currently amended) A control method for an electric power converter described in claim 5, further comprising:

setting a lower limit of the lower carrier to ~~the~~ an electric potential of the negative pole of the first DC power ~~source's negative pole~~ source;

setting an upper limit of the lower carrier and a lower limit of the upper carrier to ~~the~~ an electric potential of a pole formed by connecting the positive pole of the first DC power source with the negative pole of the second DC power source; and

setting ~~the~~ an upper limit of the upper carrier to ~~the~~ an electric potential of the positive pole of the second DC power ~~source's positive pole~~ source.

7. (Original) A control method for an electric power converter described in claim 5 wherein the lower carrier and the upper carrier are triangular waves.

8. (Currently amended) A control method for an electric power converter described in claim 5, further comprising:

generating a power distribution command based on a desired power distribution ~~commands for between~~ at least ~~said the~~ first and ~~the~~ second DC power sources; and

generating ~~[[a]]~~ an AC voltage command ~~for said power converter~~ based on the load; and wherein generating ~~a the~~ voltage command by includes adding ~~said the~~ AC voltage command to ~~said the~~ power distribution command.

9. (Currently amended) A control method for an electric power converter having first and second DC power sources, ~~using two carriers consisting of a lower carrier and a higher carrier, wherein~~ a common pole is formed by connecting a positive pole of ~~said the~~ first DC power source and a negative pole of ~~said the~~ second DC power source to a common bus

line[[]], a first switching element is provided between a negative pole of the first DC power source ~~bus line~~ and an output terminal of a load to provide conductance from the output terminal to a negative pole of the first DC power source ~~bus line~~; a first diode is connected in parallel with the first switching element[[]], a first bi-directional switch is provided for selecting bi-directional conductance between the output terminal and the common bus line[[]], and a second bi-directional switch is provided for selecting bi-directional conductance between the output terminal and ~~the a~~ a positive pole of the second DC power source ~~bus line~~; and voltage is applied to the load by switching the pole to be connected to the load; the method comprising:

generating a voltage command indicative of a voltage to be applied to the load;

and

switching a pole to be connected to the load by:

~~determining conductivity of operating~~ a switch between the positive pole and the negative ~~poles~~ pole of the first DC power source by comparing the voltage command with ~~the a~~ a lower carrier; and

~~determining conductivity of operating~~ a switch between the positive pole and the negative ~~poles~~ pole of the second DC power source by comparing ~~said the~~ the voltage command with ~~the an~~ an upper carrier; and

~~switching the pole to be connected to the load in accordance with the determining conductivity.~~

10. (Currently amended) A control method for an electric power converter described in claim 9, further comprising:

setting a lower limit of the lower carrier to the an electric potential of the ~~first DC power source's~~ negative pole of the first DC power source;

setting an upper limit of the lower carrier and a lower limit of the upper carrier to ~~the an~~ an electric potential of [[a]] the common pole ~~formed by connecting the positive pole of the first DC power source with the negative pole of the second DC power source~~; and

setting ~~the an~~ an upper limit of the upper carrier to ~~the an~~ an electric potential of the

~~second DC power source's~~ positive pole of the second DC power source.

11. (Currently amended) A control method for an electric power converter described in claim [[9]] 10 wherein the lower carrier and the upper carrier are triangular waves.

12. (Currently amended) A control method for an electric power converter described in claim 9, further comprising:

generating a power distribution command based on a desired power distribution ~~commands for~~ between at least ~~said the~~ first and the second DC power sources; and

generating [[a]] an AC voltage command ~~for said power converter~~ based on the load; ~~and wherein~~ generating a the voltage command by includes adding ~~said the~~ AC voltage command to ~~said the~~ power distribution command.

13. (Currently amended) A power converter for supplying power to a three-phase load, comprising:

a first DC power source;

a second DC power source;

a common bus line connected to a positive pole of the first DC power source and to a negative pole of the second DC power source;

a first plurality of semiconductor switches connected between a negative pole of the first DC power source and each of three terminals of [[a]] the three-phase load;

a second plurality of semiconductor switches connected between the common bus line and each of the three terminals of the three-phase load;

a third plurality of semiconductor switches connected between a positive ~~bus line~~ pole of the second DC power source and each of the three terminals of the three-phase load;

a voltage command generating portion configured to generate a voltage command indicative of a voltage to be applied to each of the three terminals of the three-phase load; and

a switch control portion that performs conductance of the configured to switch a

pole to be connected to the three-phase load by operating a switch connected between the positive pole and the negative poles pole of the first DC power source when the voltage command from said voltage command generating portion is lower than the an electric potential output by of the negative pole of the second DC power source and performs conductance of the operating a switch connected between the positive pole and the negative poles pole of the second DC power source when the voltage command from the voltage command portion is higher than the electric potential output by of the negative pole of the second DC power source.

14. (Currently amended) A power converter of claim 13, wherein the switch control portion is ~~provided with two carriers comprising a lower carrier and an upper carrier, wherein conductance of~~ further configured to operate the switch connected between the positive pole and the negative poles pole of said the first DC power source is performed by comparing the voltage command value and the lower carrier, and conductance of to operate the switch connected between the positive pole and the negative poles pole of said the second DC power source is performed by comparing the voltage command value and the upper carrier.

15. (Currently amended) A power converter of claim 14, wherein a lower limit of the lower carrier is set to ~~the an~~ an electric potential of the first DC power source's negative pole of the first DC power source, [[a]] an upper limit of the lower carrier and a lower limit of the upper carrier are set to the an electric potential of the pole formed by connecting the positive pole of the first DC power source with the negative pole of the second DC power source common bus line, and [[a]] an upper limit of the upper carrier is set to the an electric potential of the second DC power source's positive pole of the second DC power source.

16. (Original) A power converter of claim 14, wherein the lower carrier and the upper carrier are triangular waves.

17. (Currently amended) A power converter of claim 13, wherein each of the

second and the third plurality of semiconductor switches ~~comprise~~ comprises switch pairs for controlling bi-directional ~~conductance~~ conduction.

18. (Currently amended) A power converter of claim 13, and further comprising:

a power distribution command generating portion ~~that generates~~ configured to generate a power distribution command based on ~~the~~ a desired power distribution ~~commands for~~ between the first and second DC power sources, wherein a the voltage command ~~that is obtained by adding~~ is based on addition of the power distribution command and ~~the~~ an AC voltage command ~~is applied to the switch control portion~~ based on the load.